

# Opportunities in South Africa's Oil & Gas Sector

*September 26, 2013*

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**SUNBIRD ENERGY** LTD



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# Agenda

- Overview
- USTDA 101
- Sunbird Introduction
- South Africa Energy Market
- Ibhubesi Gas Project
- Call for Expressions of Interest
- Q&A

# USTDA Feasibility Study Grant

Supporting South Africa's transition to clean energy.



**U.S. Trade and Development Agency**

Connecting U.S. companies with export opportunities overseas

## **PRESS RELEASE**

August 23, 2013

## **MEDIA INQUIRIES:**

Thomas Hardy | (703) 875-4357

### **USTDA SUPPORTS OFFSHORE GAS DEVELOPMENT PROJECT IN SOUTH AFRICA**

*Facilitating South Africa's transition to clean energy*

**PRETORIA, SOUTH AFRICA** – Today, the U.S. Trade and Development Agency announced a grant to Sunbird Energy Ltd to support the development of South Africa's offshore gas. Sunbird Energy has executed an agreement to acquire a 76% stake in the project, a joint venture partner with PetroSA, the national oil company of South Africa.

In an effort to support South Africa's transition to clean energy, the U.S. Trade and Development Agency is providing a grant to Sunbird Energy Ltd to support the development plan for the Ibhubesi Offshore Gas Project. This will include completing all necessary requirements and complete an environmental impact assessment as part of the project. Today, U.S. Charge d'Affaires Catherine Hill-Herndon and Sunbird Energy Managing Director Will Barker signed the grant at the U.S. Embassy in front of witnesses from the U.S. Trade and Development Agency.

"This project not only supports President Obama's Climate Action Plan, but also the U.S. Integrated Resource Plan 2010, which calls for the expansion of gas to meet 11% of the total supply by 2030," said Charge d'Affaires Hill-Herndon. "Supporting clean energy is critically important."

"Sunbird is delighted to have secured U.S. Government support for the advancement of the Ibhubesi Gas Project," said Sunbird Energy Managing Director Will Barker. "It is a very strong validation of the regional importance of Ibhubesi to the South African energy equation. As Ibhubesi is the largest offshore gas field in the world, it is a critical component of South Africa's energy future."



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# USTDA's Mission & Tools

USTDA links U.S. businesses to export opportunities by funding project planning activities, pilot projects, and reverse trade missions while supporting sustainable infrastructure development and economic growth in partner countries.

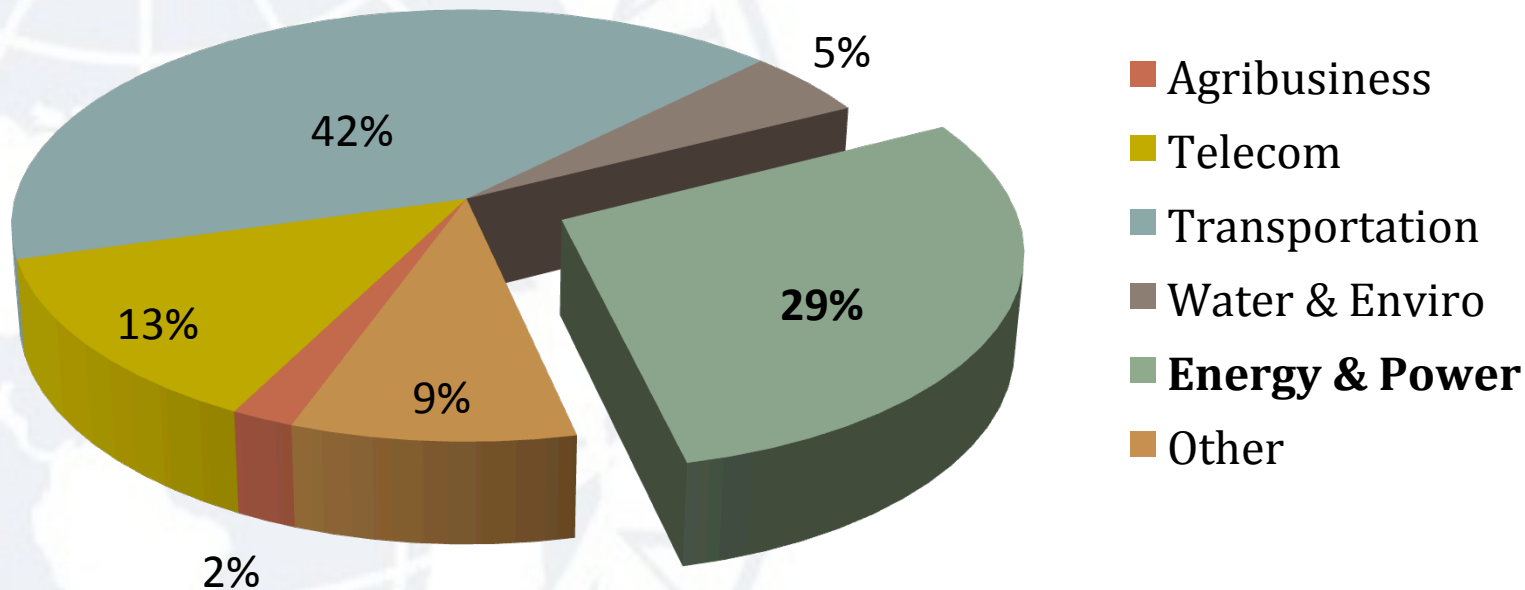
## **International Business Partnership Program**

- U.S. Study Tours / Reverse Trade Missions
- Conferences
- Workshops

## **Project Development Program**

- Feasibility Studies
- Pilot Projects
- Technical Assistance

## USTDA Project Investments in Sub-Saharan Africa by Sector (2011-2012)



- Priority sectors: **Energy, Transport, Telecom**
- In FY 2013, energy projects represent **67%** of USTDA's sub-Saharan Africa portfolio investments.



# USTDA Energy Activities in South Africa

## Project Planning Activities

- Ethekwini and Ekurhuleni Smart Metering Feasibility Studies
- Western Cape Rooftop Solar FS
- Ibhubesi Offshore Gas Subsurface Field Development Plan

## U.S. Study Tours / Reverse Trade Missions

- Southern Africa Solar Workshop and RTMs
- Eskom Renewable Energy Grid Integration



# USTDA Funding Criteria

1. **Developmental priority** in the host country
2. **Economic viability** and likelihood of success receiving implementation **financing**
3. **Mutual benefits** for the United States and partner country, including commercial opportunities for U.S. firms
4. **Priority sectors:** energy, transportation, telecom

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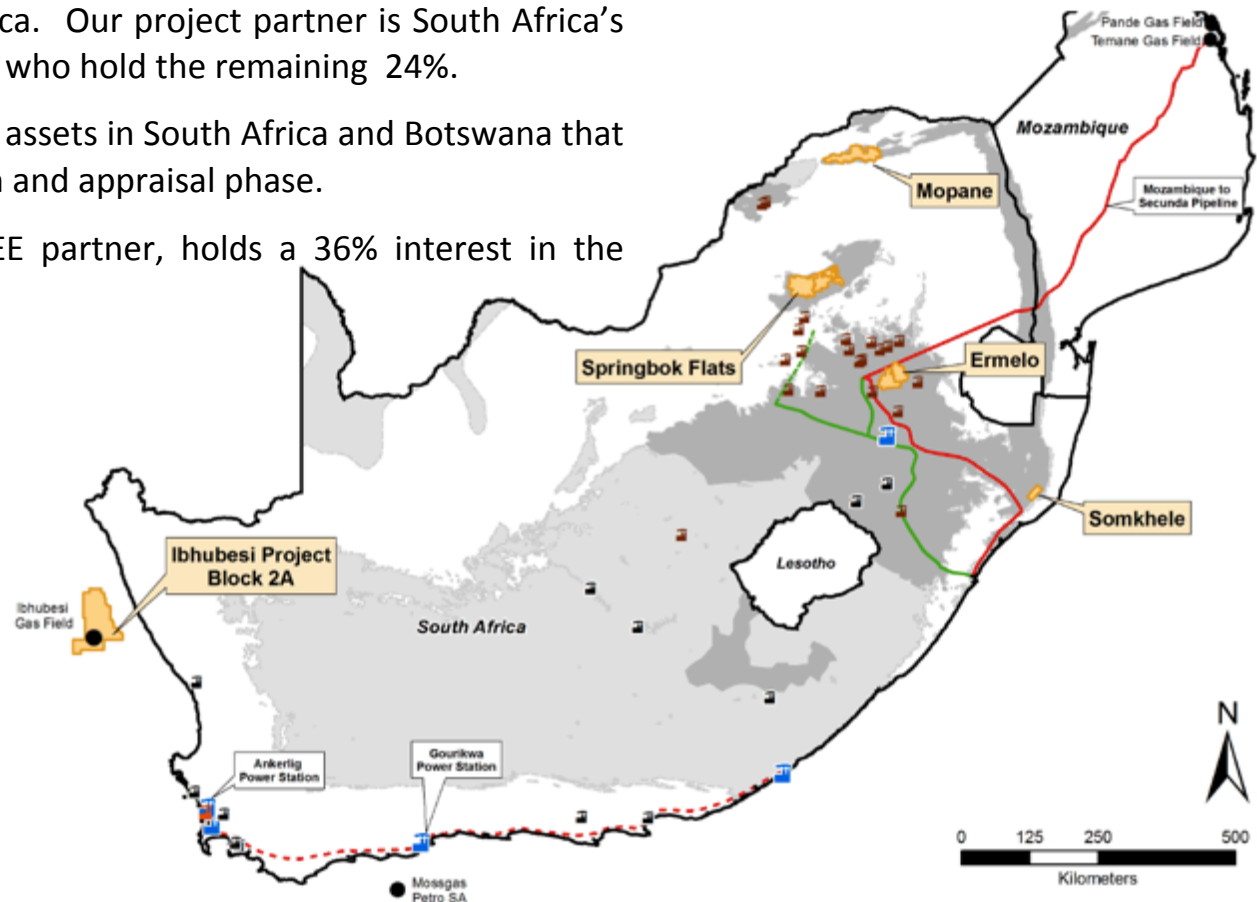
**SUNBIRD ENERGY** LTD

# USTDA EOI PRESENTATION

September 2013

# SUNBIRD ENERGY OVERVIEW

- Sunbird Energy Ltd is an Australian listed company focused on the exploration and development of large scale gas projects delivering energy to the high value southern African market.
- In December 2012 Sunbird executed an agreement to acquire a 76% operating interest in the 540 Bcf (2P) Ibhubesi Gas Project (IGP) offshore west coast South Africa. Our project partner is South Africa's national oil company, PetroSA, who hold the remaining 24%.
- Sunbird has a portfolio of CBM assets in South Africa and Botswana that are currently in the exploration and appraisal phase.
- Umbono Capital, Sunbird's BEE partner, holds a 36% interest in the company.



# MANAGEMENT TEAM



## Board

### **Kerwin Rana | Chairman**

Chemical Engineer with 17 years mining industry experience, previously Executive Head of New Business for De Beers. Managing Director, Umbono Capital

### **Will Barker | Managing Director**

Geologist with 15 years experience in the oil and gas industry, previously GM LNG, Arrow Energy & OM, New Guinea Energy

### **Andrew Leibovitch | Executive Director**

Chartered Accountant, 20+ years in Corp Finance, previous GM roles at Woodside & Western Mining

### **Marcus Gracey | Non-Executive Director**

Corporate Lawyer with extensive energy experience, currently Commercial & Legal Manager at New Standard Energy

## Management Team

### **Nathan Rayner | Technical Director**

Reservoir Engineer with extensive experience in production, reservoir and petroleum engineering

### **Carla Mackay | Chief Financial Officer**

Chartered Accountant, experience in SA banking and mining environments including corporate finance, previously with Umbono/Old Mutual

### **Mark Balfour | General Counsel/Company Secretary**

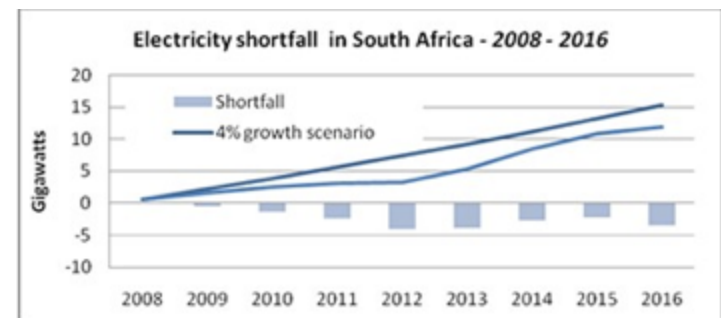
Commercial and Resources Lawyer with 30 years' experience in private legal practice, in-house counsel roles and executive directorships in both listed and unlisted companies .

### **Richard Barker | Project Management**

Corporate lawyer with 15 years experience in corporate and construction advice and litigation working with top Australian Law firms.

# MARKET OVERVIEW

- The South African electricity market is one of the tightest in the world with a reserve margin in the range of 3-5% which is well below the international standard of 15%
- Electricity supply crisis's in recent years with operational restrictions and black outs
- Electricity demand is estimated to grow by approximately 4% annually for the next 25 years.
- Greater 85% of electricity generated from coal and a very limited domestic gas supply means critical lack of peaking power (RSA Dept of Energy)
- Since 2007 electricity prices have increased at >20% per year with major utility Eskom applying for additional 16% pa increase for next 5 years (Eskom)
- Limited power generation in Western Cape - ~60% of electricity transmitted 1400km from Eastern Cape resulting in high transmission losses (Mott MacDonald estimates 10 – 20% energy losses)
- Ankerlig power station on the west coast is being run on expensive imported diesel to supply additional peak power
- Structural change in progress – Government now opening up supply to Independent Power Producers (IPP) and looking for alternative energy sources to coal
- RSA is 14th highest emitter of greenhouse gases - carbon tax is to be introduced increasing the advantages of low-carbon gas supplies



Shortfall in electricity forecast between 2008 and 2016

**Ibhubesi is uniquely positioned to provide low emission, near term power generation to the west coast of South Africa.**



## Growing Need for Power

The South African Ministry of Energy and Eskom are currently planning a 3 phase program to meet South Africa's growing energy demands and provide energy security over the next 30 years. The targets relevant to the Ibhubesi Gas Project are listed below:

### Short Term - Ankerlig Conversion

Eskom has recently released an RFI regarding the supply of gas to the Ankerlig Power Station, which is currently running on imported diesel.

### Medium Term - Risk Mitigation Energy

474 MW to be generated from Natural Gas, which represents the capacity allocated to "Gas CCGT (natural gas)", "New build", for the years 2019 to 2020.



### Long Term - Baseload Energy

2652 MW (baseload or mid merit) to be generated from Natural Gas (which includes Liquefied Natural Gas or Natural Gas delivered by pipeline from a Natural Gas Field), which represents the capacity allocated to "Gas CCGT (natural gas)" and "OCGT (diesel)", "New build", for the years 2021 to 2025.

## Ibhubesi Funding Package

- The U.S. Trade and Development Agency (USTDA) granted Sunbird a US\$700,000 funding package, in August 2013
- The funds will be used to complete the Field Development Plan (FDP) for Ibhubesi with MHA
- The grant is a strong validation of the regional importance of Ibhubesi to the South African energy equation



*“The project supports both President Obama’s Climate Action Plan and South Africa’s Integrated Resource Plan 2010, which calls for the expansion of gas-fired power generation from 2% to 11% of the total supply by 2030,” said U.S. Charge d’Affaires for South Africa Catherine Hill-Herndon.*

## \$7 Billion - Power Africa Initiative

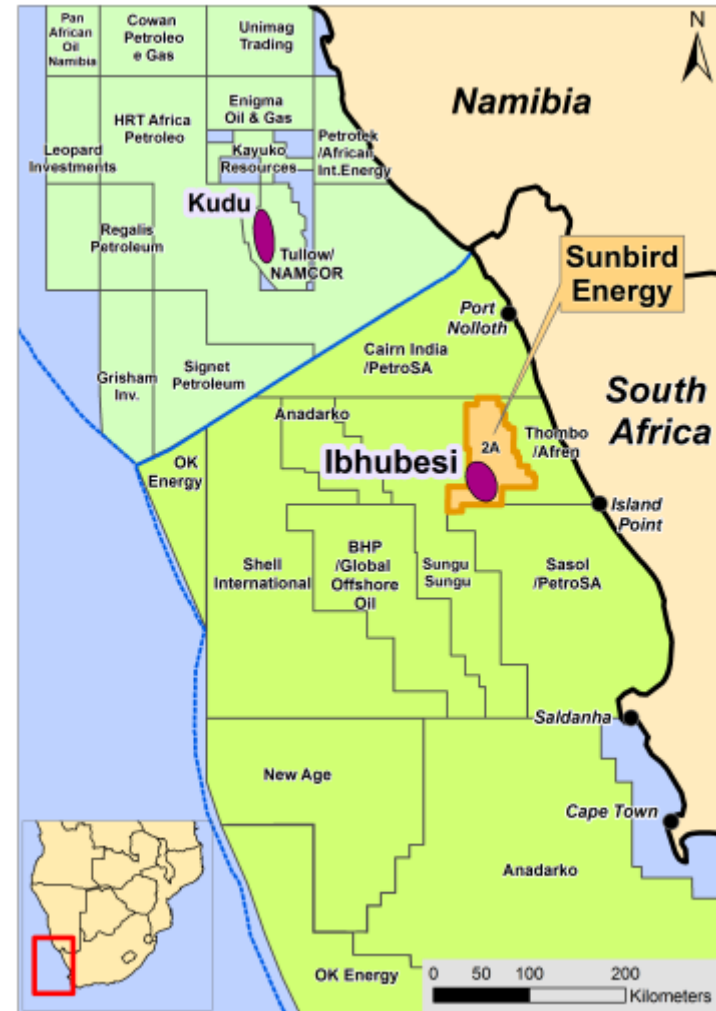
- In July President Barack Obama visited South Africa and announced the “Power Africa” initiative
- US government has committed \$7 billion over the next five for clean energy projects in sub-Saharan Africa



# IGP: PROJECT OVERVIEW

**Largest undeveloped gas field in South Africa with reserves of 540 Bcf (2P) and further 8 Tcf of prospective resources.**

- 5000km<sup>2</sup> Production Licence
- 380km north of Cape Town
- 70km offshore, 250m of water
- 300km south of the Kudu gas field
- 11 wells drilled, 7 gas discoveries
- 1,770km<sup>2</sup> 3D seismic coverage
- \$120m spent on exploration and appraisal since 2000
- Recent high profile entries into area - Shell, Anadarko, Cairn India, Exxon and BHP actively exploring



Orange Basin: Best estimate Prospective Resources of 22.5 Tcf gas in place, source: Petroleum Agency of South Africa

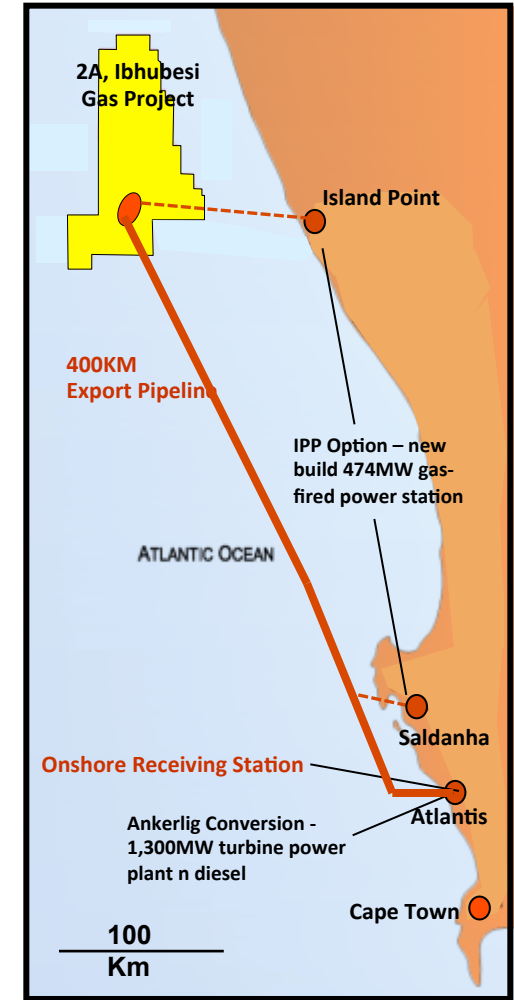
# IGP: DEVELOPMENT OPPORTUNITY

## Independent studies demonstrate viability of development:

- Reserves estimate completed by MHA Petroleum Consultants, Denver
- Surface facilities development concept studies conducted by Wood Group Kenny and Granherne, based in Houston and Perth
- Environmental pre-scoping assessment undertaken by CCA Environmental, based in Cape Town
- Review of gas marketing opportunities, energy pricing and project economics completed by Standard Bank, based in Johannesburg

## Gas Demand and Offtake:

- Total production volume - 540 Bcf (2P reserves)
- Supply profile – 28.3 Bcf/year (average 80 MMscf/d) with 15 year plateau
- Sales Points –
  - Eskom's Ankerlig Power Plant, Atlantis
  - IPP at Island Point
  - IPP Saldanha





## Reserves independently certified by MHA Petroleum Consultants in June 2013:

- 1P reserves of 210 Bcf
- Based on 4 production tested wells
- Highest certainty of recovery (P90 - 90% probability)

## 2P Reserves: Most Likely Recovery

- 540 Bcf 2P
- Recoverable gas volumes from the 7 discovery wells (P50 - 50% probability)

## Extensive Exploration Upside:

- High historical success rate, 7 discoveries from 11 wells
- Over 8 Tcf of Prospective Resource within drilling targets defined by 3D/2D seismic

	Recoverable Gas Volume (Bcf)	Recoverable Condensate Volume (MMbbls)
Proved Reserves (1P)	210	1.7
Proved+Probable Reserves (2P)	540	4.3
Proved+Probable+Possible Reserves (3P)	915	7.3

Source: MHA

Unrisked Gross Prospective Resources (Bcf)			
Reservoirs	Low	Best	High
Sequence 14 (outside 3D)	4,360	6,369	9,082
Sequence 15	1,189	1,702	2,324
Kudu Sand	106	286	628
<b>TOTAL</b>	<b>5,655</b>	<b>8,357</b>	<b>12,034</b>

Source: Forest Oil Corp

# IGP: DEVELOPMENT CONCEPT

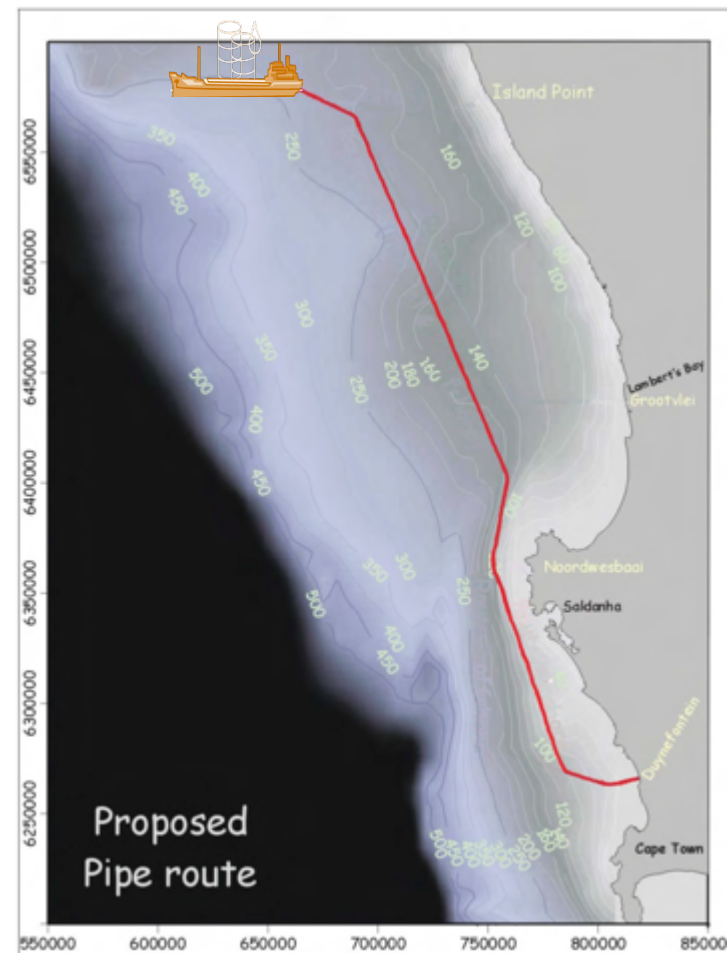
## Phase 1 Development

- *Wells* – 4 to 5 vertical production wells
- *Subsea infrastructure* – Horizontal subsea wellheads, 4" flow lines, umbilicals, 8 slot gas gathering manifold, 2 x 6" production risers
- *Offshore Processing Facility* – A FPSO of approximately 75000dwt vessel with topsides including gas dehydration, condensate stripping, gas compression, MEG regeneration and power generation
- *Dry Gas Export Pipeline* – 14", 400km to shore crossing north of Cape Town and short section (15km) of onshore pipeline
- *Onshore Facility* - Small onshore gas receiving station, including heating, pressure reduction, metering

## Phase 2 Development

- *Wells* – Further 5 production wells tied to existing facilities
- *Subsea Infrastructure* – connection of the new wells to the existing FPSO, wellheads, flowlines and umbilicals

**Based on an expected gas price of US\$12-18/Gj, development of Ibhubesi is economically attractive and meets investment criteria for project financing.**



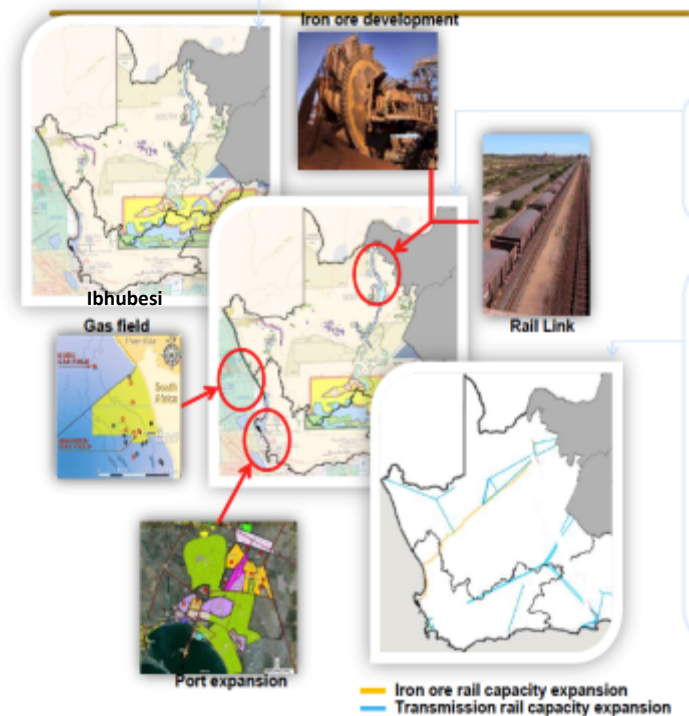
# IGP: NATIONAL BENEFITS

A local energy supply in the west that will assist it in meeting its growing energy needs, improve its energy security, alleviate power shortages, reduce line losses and provide numerous other benefits.

- **SIP 5 Project:** Presidential Infrastructure Coordinating Commission as a SIP5 project.
- **Foreign Direct Investment:** of R20-40 billion
- **Electricity Generation:** 500 - 2,000MW pa of cleaner electricity
- **Government Revenue:** Royalties, corporate tax, payroll taxes and state (PetroSA) participation.
- **Industry Participation:** contractors and service providers.
- **Downstream Industry Creation:** create industry onshore
- **Upstream Industry Creation:** opens the west coast to a new industry.
- **Job Creation:** substantial direct and indirect jobs
- **Training & Development:** commitment to development of local skills and enterprise.
- **Reduction of Carbon Emissions:** directly reduce CO<sub>2</sub> emissions by 20 million tonnes
- **Significant Existing BEE/RSA Participation:** BEE groups hold (indirectly) 27% of IGP and state participation (PetroSA) is currently 24%.
- **Rand-Based Energy Pricing:** ability to price proportion of gas supply in Rand
- **Balance of Trade Benefits:** reduction deficit from fuel imports.
- **Security of Supply:** reduction in reliance on foreign energy supply.

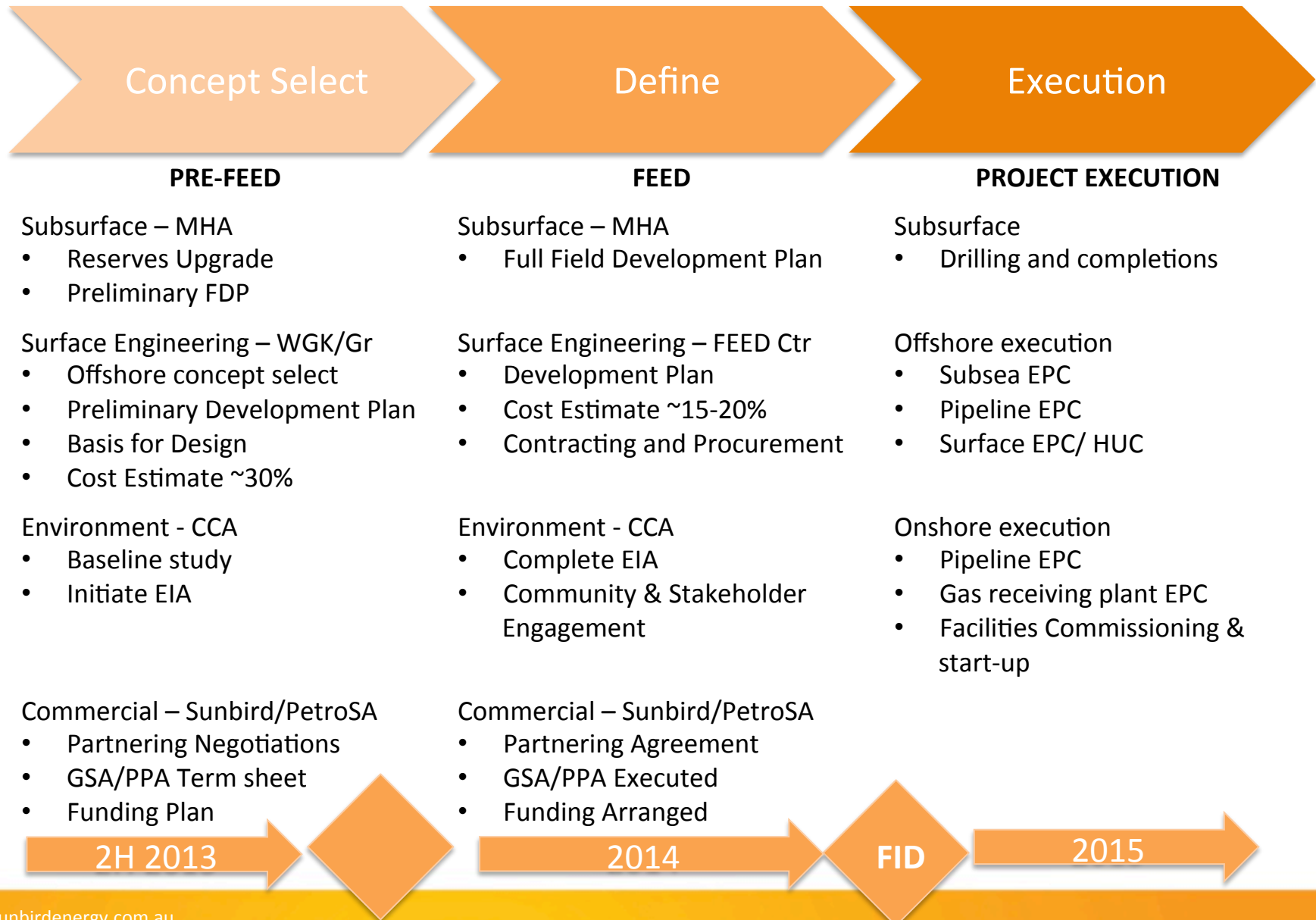


## SIP 5: Saldanha – Northern Cape Development Corridor



PRESIDENTIAL INFRASTRUCTURE COORDINATING COMMISSION

# IGP: ROADMAP





# IGP: EXPRESSION OF INTEREST

## Objectives

- Engage with major industry participants to gauge level and nature of interest in project participation
- Identify and select preferred parties to work jointly to further define engineering and project management services to move the project to FID.
- Identify all industry participants that would like to receive future information on equipment, services and construction tenders and contracts

## Participation

- Sunbird is flexible in contracting strategies and able to consider different participation models including but not limited to: Risk services contracts, Build and own, Build, own and operate

Key Event	Indicative Dates
Publication of Expression of Interest	September, 2013
Registration of Interested Parties	Early October, 2013
Initial Interested Party Meetings and Discussions	October, 2013
Short List of Preferred Parties	November, 2013

## Required Services

### Drilling & Completions

Well Design  
Drilling and Completion Equipment  
Drilling and Completion Services

### Subsea Equipment

Subsea Engineering Design  
Subsea Equipment Manufacturers  
Subsea Installation and Construction

### Offshore Gas Processing Facilities/FPSO

Planning & Design  
Option 1 – Tanker conversion to FPSO  
Option 2 – Refit existing FPSO  
Build Own Operate

### Offshore Pipelines

Seabed survey, Metocean study  
Planning & Design  
Pipeline Manufacturers  
Pipeline Installation and Construction  
Build Own Operate

### IPP

Feasibility Study  
Planning & Design  
IPP Developer  
Power Generation Manufacturers  
Build Own Operate

### Project Management

Integrated Project Management Services

### Health, Safety & Environment

HSE Management plan  
H&S Service Providers

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Production testing of the A-K2 well Ibhubesi Gas Field in 2000

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## Ibhubesi Gas Project

Sunbird has executed an agreement to acquire a 76% stake in the IGP (Block 2A) from Forest Oil Corporation and The Anschutz Overseas Corporation which will give Sunbird the right to develop and operate the IGP, subject to approval of a transfer of title from the South African Department of Mineral Resources.

## Forward Looking Statement

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The reserves and contingent resource estimates used in this announcement were compiled by Tim Hower of MHA Petroleum Consultants LLC and are consistent with the definitions of proved, probable, and possible hydrocarbon reserves and resources that appear in the Australian Stock Exchange (ASX) Listing Rules. Mr Hower is qualified in accordance with the requirements of ASX listing rule 5.11 and has consented to the use of the reserves and resource figures in the form and context in which they appear in this announcement.

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